Listing of Claims:

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. In brief, the claims have not been amended, relative to the listing of claims that appeared in applicants prior response to Office action.

1-27. (Canceled)

28. (Previously Presented) The kit of claim 83, wherein the probe is photoluminescent.

29. (Previously Presented) The kit of claim 28, wherein the photoluminescence lifetime of the probe is greater than the rotational correlation time of the unbound probe and less than the rotational correlation time of the complex formed by binding of the probe, member or member product, and mass label.

30. (Previously Presented) The kit of claim 83, wherein the probe binds to the member noncovalently.

31. (Canceled)

32. (Canceled)

33. (Previously Presented) The kit of claim 83, wherein the mass label is capable of specifically binding to more than one member.

34. (Previously Presented) The kit of claim 83, the mass label being a first mass label, further comprising a second mass label capable of specifically binding to at least one of the member, the complex formed by binding of the probe to the member, the member product, and the first mass label, but not to the probe alone.

35. (Original) The kit of claim 34, wherein the second mass label is capable of specifically binding to at least two first mass labels, so that the second mass label may form crosslinks between members.

36. (Original) The kit of claim 34, wherein the second mass label includes at least one of the following: avidin, biotin, lectin, sugar, and an immunological binding partner.

37. (Previously Presented) The kit of claim 83, wherein the probe is not normally present in the sample.

38. (Previously Presented) The kit of claim 83, wherein the mass label is not normally present in the sample.

39. (Previously Presented) The kit of claim 83, wherein the property of the probe is related to a rotational diffusion coefficient of the probe.

40. (Original) The kit of claim 39, wherein the property may be measured using a technique selected from the group consisting of polarization, light scattering, and magnetic resonance.

41. (Previously Presented) The kit of claim 83, wherein the property of the probe is related to the translational diffusion coefficient of the probe.

42-82. (Canceled)

83. (Previously Presented) A kit for detecting the presence and/or activity of an analyte in a sample, the kit comprising:

a probe bound to a member, where the member is a compound that specifically binds to the analyte, or is a substrate for the analyte; and

a particulate mass label capable of specifically binding to one of the member and the complex formed by binding of the member to the analyte, or one of the member and the product of the action of the analyte on the member;

wherein a measurable property of the probe is sensitive to the size of the complex formed by binding of the mass label, probe, and the member, member-analyte complex, or member product.

84. (Previously Presented) The kit of claim 83, wherein the particulate mass label is selected from the group consisting of a macromolecule, a dendrimer, a glass bead, a latex bead, a polyacrylnitrile bead, and a liposome.

85. (Previously Presented) The kit of claim 83, wherein the particulate mass label is a bead.

86. (Previously Presented) The kit of claim 83, wherein the particulate mass label is a colloidal metal or a nanocrystal.

87. (Previously Presented) The kit of claim 83, wherein the analyte is an enzyme, and the probe is bound to a member that is a substrate for the enzyme.

88. (Previously Presented) The kit of claim 87, wherein the measurable property of the probe is different for the probe bound to the enzyme substrate than for the complex of the probe, the member product, and the mass label.

89. (Previously Presented) The kit of claim 88, wherein the measurable property may be measured using fluorescence polarization.